

7-21-04

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EXPRESS MAIL NO. EV335394641US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Motohide Yamazaki et al.  
Application No. : ~~10/617,317~~ 10/617,371  
Filed : July 10, 2003  
For : PRODUCTION OF EXOPOLYSACCHARIDES UNATTACHED  
TO THE SURFACE OF BACTERIAL CELLS

Art Unit : ~~4475~~ 1651  
Docket No. : ~~850136.402D1~~  
Date : July 20, 2004

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents:

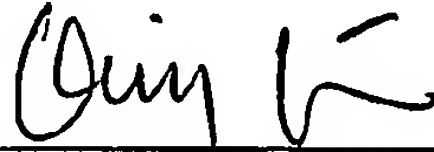
In accordance with 37 CFR 1.56 and 1.97 through 1.98, applicants wish to make known to the Patent and Trademark Office the references set forth on the attached Form PTO-1449. This application is a divisional and relies, under 35 U.S.C. § 120, on the earlier filing date of, prior U.S. Patent Application No. 09/905,829, filed July 13, 2001, now U.S. Patent 6,605,461. The references listed on the attached Form PTO-1449 were submitted to and/or cited by the Patent and Trademark Office in this prior application and, therefore, are not required to be provided in this application. If the Examiner wishes, copies will be provided upon request. As to any reference supplied, applicants do not admit that it is "prior art" under 35 U.S.C. §§ 102 or 103, and specifically reserve the right to traverse or antedate any such reference, as by a showing under 37 CFR 1.131 or other method. Although the aforesaid references are made known to the Patent and Trademark Office in compliance with applicants' duty to disclose all information they are aware of which is believed relevant to the examination of the above-identified application, applicants believe that their invention is patentable.

Please acknowledge receipt of this Information Disclosure Statement and kindly make the cited references of record in the above-identified application.

Applicants believe this Information Disclosure Statement has been timely filed, however, the Director is authorized to charge any fee due by way of this Information Disclosure Statement to our Deposit Account No. 19-1090.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC



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Qing Lin, Ph.D.

Registration No. 53,937

QXL:ljt

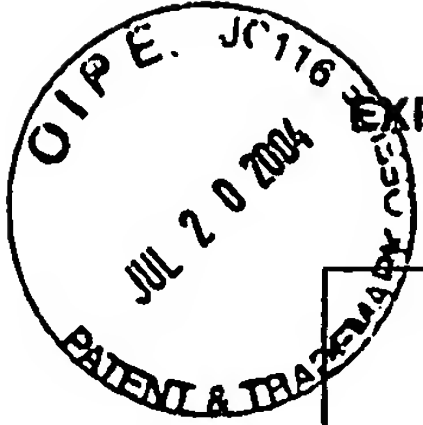
Enclosures:

Postcard

Form PTO-1449 (4 Sheets)

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500274



EXPRESS MAIL NO. EV335394641US

**TRANSMITTAL  
FORM***(To be used for all correspondence  
after initial filing)*

Application Number	10/617,317
Filing Date	July 10, 2003
First Named Inventor	Motohide Yamazaki
Art Unit	1632
Examiner Name	
Attorney Docket No.	850136.402D1

**ENCLOSURES (check all that apply)**

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement; Form PTO-1449 <input type="checkbox"/> Cited References <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts under 37 C.F.R. 1.52 or 1.53 <input type="checkbox"/> Response to Missing Parts/Incomplete Application	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Request for Corrected Filing Receipt <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Declaration <input type="checkbox"/> Statement under 37 CFR 3.73(b) <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund	<input type="checkbox"/> CD(s), Number of CD(s) _____ <input type="checkbox"/> After Allowance Communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC ( <i>Appeal Notice, Brief, Reply Brief</i> ) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Return Receipt Postcard <input type="checkbox"/> Additional Enclosure(s) ( <i>please identify below</i> ): _____ _____ _____
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Remarks**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Individual Name	Qing Lin, Ph.D. Reg. No. 53,937	Customer Number <b>00500</b>
Signature		
Date	July 20, 2004	

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. 1500230

FORM PTO-143  
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

APPLICATION NO.

850136.402D1

10/617,317

APPLICANTS

Motohide Yamazaki et al.

FILING DATE

July 10, 2003

GROUP ART UNIT

1632

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	3915800	10/28/75	Kang et al.	195	31 P	
	AB	3960832	06/01/76	Kang et al.	536	123	
	AC	4326053	04/20/82	Kang et al.	536	123	
	AD	4342866	08/03/83	Kang et al.	536	119	
	AE	4401760	08/30/83	Peik et al.	435	101	
	AF	4963668	10/16/90	Allen et al.	536	114	
	AG	5300429	04/05/94	Baird et al.	435	101	
	AH	5338681	08/16/94	Deckwer et al.	435	252.1	
	AI	5602241	02/11/97	Maruyama et al.	536	127	
	AJ	5854034	12/29/98	Pollock et al.	435	101	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	AK	EP 266163 A2	05/04/88	EPO		
	AL					
	AM					
	AN					
	AO					

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	AP	ATCC Catalogue of Bacteria and Bacteriophages, 19th edition, 1996, pp. 26, 68 and 295.
	AQ	Lobas et al., "Structure and Physical Properties of the Extracellular Polysaccharide PS-P4 Produced by Sphingomonas paucimobilis P4 (DSM 6418)," <i>Carbohydrate Research</i> , 251 (1994) 303-313.
	AR	Banik R. M. et al: "Exopolysaccharide of Gellan Family: Prospects and Potential." <i>World Journal Of Microbiology &amp; Biotechnology</i> , vol. 16, No. 5, Jul. 2000 (2000-07), pp. 407-414, ISSN: 0959-3993.

EXAMINER

DATE CONSIDERED

\* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).

FORM PTO-1449 (REV. 7-80)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. <b>850136.402D1</b>	APPLICATION NO. <b>10/617,317</b>		
<b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				APPLICANTS <b>Motohide Yamazaki et al.</b>			
				FILING DATE <b>July 10, 2003</b>		GROUP ART UNIT <b>1632</b>	
<b>U.S. PATENT DOCUMENTS</b>							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	BA	5985623	11/16/99	Pollock et al.	435	101	
	BB	6027925	02/22/00	Pollock et al.	435	104	
	BC	6030817	02/29/00	Pollock et al.	435	104	
	BD	6066479	05/23/00	Wright et al.	435	101	
	BE						
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION		
					YES	NO	
	BF						
	BG						
<b>OTHER PRIOR ART</b> <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>							
	BH	Jay A. J. et al: "Analysis of Structure and Function of Gallans with Different Substitution Patterns." Carbohydrate Polymers, vol. 35, No. 3-4. Mar. 4, 1998 (1998-03-04), pp. 179-188, ISSN: 0144-8617.					
	BI	Pollock T. J. et al: "Planktonic/Sessile Dimorphism of Polysaccharide-Encapsulated Sphingomonads." <i>Journal Of Industrial Microbiology And Biotechnology</i> , vol. 23, No. 4/5. 1999, pp. 436-441, XP0010303946, ISSN: 1367-5435.					
	BJ	Manna B. Et al, "Production and Rheological Characteristics of the Microbial Polysaccharide Gellan." <i>Letters In Applied Microbiology</i> , vol. 23, No. 3, 1996, pp. 141-145, XP001031116, ISSN: 0266-8254.					
	BK	Baird et al., "Industrial Applications of Some New Microbial Polysaccharides," <i>Biotechnology</i> , Nov. 1983, pp. 778-783.					
	BL	Fialho et al., "Structures and Properties of Gellan Polymers Produced by Sphingomonas paucimobilis AATCC 31461 form Lactose Compared with Those Produced from Glucose and from Cheese Whey", <i>AEM</i> , vol. 65, No. 6, Jun. 1999, pp. 2485-2491.					
	BM	Harding et al., "Isolation of Genes Essential for the Biosynthesis of Gellan Gum," <i>The FASEB Journal</i> , vol. 7, No. 7, May 1993, p. A1259.					
	BN	Jansson et al., "Structural Studies of Gellan Gum, an Extracellular Polysaccharide Elaborated by Pseudomonas elodea," <i>Carboydrate Research</i> , 124, 1983, pp. 135-139.					
EXAMINER				DATE CONSIDERED			
* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).							

FORM PTO-1449 (REV. 7-80)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 850136.402D1		APPLICATION NO. 10/617,317	
<b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				APPLICANTS Motohide Yamazaki et al.			
				FILING DATE July 10, 2003		GROUP ART UNIT 1632	
<b>U.S. PATENT DOCUMENTS</b>							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	CA						
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION		
					YES NO		
	CB						
<b>OTHER PRIOR ART</b> (Including Author, Title, Date, Pertinent Pages, Etc.)							
	CC	Kang et al., "A New Bacterial Heteropolysaccharide," Extracellular Microbial Polysaccharides, 1977, pp. 220-230.					
	CD	Kang et al., "Agar-Like Polysaccharide Produced by a Pseudomonas Species: Production and Basic Properties," <i>AEM</i> , vol. 43, No. 3, 1982, pp. 1086-1091.					
	CE	Kang et al., "Some Novel Bacterial Polysaccharides of Recent Development," <i>Progress in Industrial Microbiology</i> ; vol. 18, 1983, pp. 231-253.					
	CF	Kelco Biopolymer Product Information, "Products Gellan Gum", Feb. 2000.					
	CG	Kuo et al., "Isolation and Location of L-Glycerate, an Unusual Acyl Substituent in Gellan Gum," <i>Carbohydrate Research</i> , 156, 1986, pp. 173-187.					
	CH	Moorhouse et al., "PS-60: A New Gel-Forming Polysaccharide," Solution Properties of Polysaccharides, 1981, pp. 111-124.					
	CI	Moorhouse, "Structure/Property Relationships of a Family of Microbial Polysaccharides," Industrial Polysaccharides: Genetic Engineering, Structure/Property Relations and Applications, 1987, pp. 187-206.					
	CJ	Nussinovitch, "Gellan Gum," Hydrocolloid Applications, 1997, pp. 63-82. Pollock, "Gellan-related Polysaccharides and the genus Sphingomonas," <i>J. of Gen Microbiol.</i> , vol. 139, 1993, pp. 1939-1945.					
	CK	Pollock et al., "Planktonic/sessile Dimorphism of Polysaccharide-Encapsulated Sphingomonads," <i>JIMB</i> , vol. 23, 1999, pp. 436-441.					
	CL	Pollock et al., "Production of Xanthan Gum by Sphingomonas bacteria Carrying Genes from Xanthomonas campestris," <i>JIMB</i> , vol. 19, 1997, pp. 92-97.					
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	DA						
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY		TRANSLATION YES NO	
	DB						
<b>OTHER PRIOR ART</b> (Including Author, Title, Date, Pertinent Pages, Etc.)							
	DC	Pollock et al., "Mechanism of Bacitracin Resistance in Gram-Negative Bacteria That Synthesize Exopolysaccharides," <i>J. of Bacteriol.</i> , vol. 176, No. 20, 1994, pp. 6229-6237.					
	DD	Pollock et al., "Assignment of Biochemical Functions to Glycosyl Transferase Genes Which are Essential for Biosynthesis of Exopolysaccharides in Sphingomonas Strain S88 and Rhizobium leguminosarum," <i>J. of Bacteriol.</i> , vol. 180, No. 3, 1998, pp. 586-593.					
	DE	Thorne et al., "Increasing the Yield and Viscosity of Exopolysaccharides Secreted by Sphingomonas by Augmentation of Chromosomal Genes with Multiple Copies of Cloned Biosynthetic Genes," <i>JIMB</i> , vol. 25, 2000, pp. 49-57.					
	DF	Vartak et al., "Glucose Metabolism in 'Sphingomonas elodea': pathway engineering via construction of a glucose-6-phosphate dehydrogenase insertion mutant," <i>Microbiology</i> , vol. 141, 1995, pp. 2339-2350.					
	DG	Videira et al., "Identification of the pgmG Gene, Encoding a Bifunctional Protein with Phosphoglucomutase and Phosphomannomutase Activities, in the Gellan Gum-Producing Strain Sphingomonas paucimobilis ATCC 31461," <i>Appl. Environ Microbiol.</i> , vol. 66, No. 5, 2000, pp. 2252-2258.					
	DH	Yamazaki et al., "Linkage of Genes Essential for Synthesis of a Polysaccharide Capsule in Sphingomonas Strain S88," <i>J. Bacteriol.</i> , vol. 178, No. 9, 1996, pp. 2676-2687.					
	DI						
	DJ						
	DK						
	DL						
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